

MONTHLY JOURNAL OF
THE MUSHROOM GROWERS'
ASSOCIATION

MGA

BULLETIN

MARCH 1960

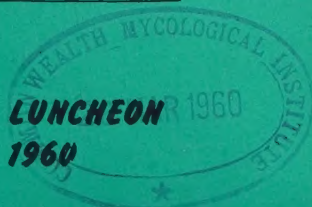
NUMBER 123

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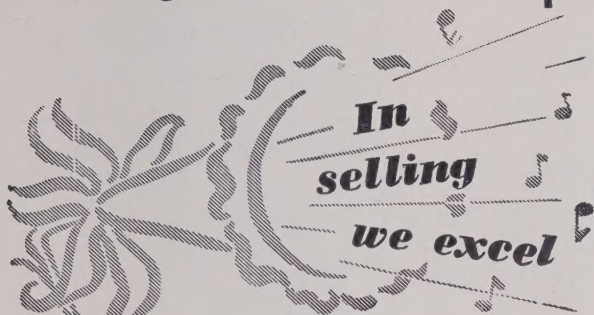
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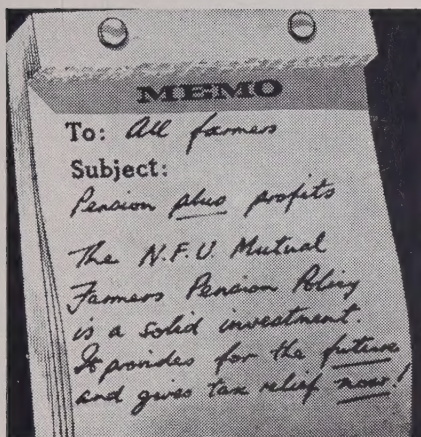
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EDITORIAL

TALKING POINT—CONTROLLED MARKETING

For a very long time now, in fact ever since I first became associated with the Mushroom industry, two points in particular have caused me considerable disquiet. The first is the complete absence of any form of controlled grading and marketing and the second, the great difficulty which some growers experience in disposing satisfactorily of their spent compost of which, roughly speaking, about 200,000 tons are available every year. Whilst the latter is at least the subject of an investigation yet once again, the former is still very much in the wilderness.

I realise only too well that the very mention of the word control will cause the hackles to stand up on more than one neck but the fact remains that the existing marketing arrangements are little short of chaotic, with an almost complete lack of market intelligence available to the growers, and with this and that market overloaded from time to time inevitably bringing a low price return.

A close-bound industry such as ours should and could exercise the necessary marketing control to ensure, as far as possible, a fair price return for a fair quality product and there is surely nothing unethical in a desire to obtain a square deal all round, for producer, salesman and retailer.

Are there too many snags in this suggestion? Is it impossible to expect that individual growers, on their own farms, would in their own interests be willing to exercise strict control over grading and be willing to pack to a standard weight and in a standard or near standard container? The individual grower need not necessarily lose his identity in the suggested arrangements and need not necessarily lose whatever small premium his mushrooms might command on the market, for salesman and retailer alike have in many cases learned to trust, almost implicitly, this and that grower by name.

Every mushroom grower is only too well aware of what a bad traveller his product is and is aware also, of the vast difference which takes place in the appearance of the mushroom between the time it leaves the farm and is on show in the retailer's shop. Or even worse, just what it looks like in the home of the housewife. This matter of travel and presentation will have to be overcome, no matter what the obstacles.

WRA

AREA 'A' ELECTION RESULT

There was a 55% poll in the Area A (Kent, Surrey, Sussex, London and Middlesex) elections for the three Area Seat vacancies on the MGA Executive Committee.

Two retiring members, Mr. P. B. Stanley-Evans, present Vice-Chairman of the Executive, and Mr. A. J. Berry, Chairman of the Publicity Sub-Committee were returned, together with Mr. G. V. Allen, a former MGA Chairman.

This is the first occasion that any polling has taken place since the Area Representation-Postal Voting, was introduced in the 1958 elections. In the circumstances, a 55% poll, not good by MGA standards, can however be regarded as reasonably satisfactory.

There were five candidates in all for the three vacancies. Voting was extremely close with a margin of only four between the highest of the unsuccessful candidates and the lowest of those successful.

Mr. Henry Haynes of the NFU with his personal secretary, Miss Valerie Nicol, acted as Tellers.

NEW RESEARCH COUNCIL SECRETARY

Professor E. G. Cox, Professor of Inorganic and Structural Chemistry at the University of Leeds, will, on 1st July next, succeed Sir William Slater as Secretary of the Agricultural Research Council. Sir William, twice Guest of Honour at MGA annual luncheons, is retiring. He has been an extremely good friend to the Mushroom Industry in this country.

MR. V. L. BARROW

Mr. V. L. Barrow, Managing Director of Shirley Organics Ltd., has been elected President of the Association of British Organic Fertilisers. This year marks the 21st anniversary of the formation of this Association.

SKI-ING SUCCESS

Miss Tessa Dredge, daughter of Major and Mrs. Dredge of Sundridge, Sevenoaks, Kent, came 3rd in the Junior Ladies' Ski Championship, Downhill Race, at St. Moritz, with a time of 2 minutes, 13 seconds, just $1\frac{1}{2}$ seconds more than the winner. She was also second in the Junior Ski Jumping Championship at Wengen, earlier in the month. With two other junior trainees, Miss Dredge was selected to compete in the Ladies' Championship at Davos, in order to gain racing experience. Miss Caroline Sims, formerly employed by PPDA at Agriculture House occupied 4th place in the Ladies' Downhill Championship Race at Davos and she was 1st in the Lady Denham Downhill Race at Wengen.

STUDIES ON THE INFLUENCE OF CARBON DIOXIDE ON THE CULTIVATED MUSHROOM

By **Dr. H. J. Tschierpe**

Institut für Gemüsebau der Technischen Universität Berlin

Direktor Prof. Dr. H. Riethus

(The original paper was published in "Die Gartenbauwissenschaft 24, 1, 18-75, 1959)

B. Carbon-dioxide under commercial growing conditions

Horse manure and all the other organic materials suitable for mushroom growing must be composted before spawning. As a consequence of the activity of thermophilic microorganisms the compost heap heats up to about 130° F. During this stage the organic and inorganic nitrogen are ammonified. "As the temperature continues to rise up to 175 to 185° F. the biological activity decreases rapidly and chemical reactions occur . . ." (**Sinden and Hauser, 1953**).

The kind of the microbiological and chemical reactions will not be discussed here. Here it is only important to state that the microbiological as well as the chemical processes are of an oxidative kind. **Lambert and Davis (1934)** published the results of gas analysis from the air in mushroom compost heaps. According to this there occurs in the core of the heap a CO₂-increase and an oxygen decrease. Anaerobic conditions may occur 90 cm. (3 ft.) from the side and 30 cm. (1 ft.) from the upper surface of the heap. The temperatures in the anaerobic core are about 110—120° F. compared with 160—180° F. in the regions with sufficient oxygen. In the aerobic zone the compost has the desired alkaline reaction (pH 7.1 to 8.5), in the anaerobic core the pH lies between 5.1 and 6.6. In compost heaps, stacked wider than 180 cm. (6 ft.), after a turn all the oxygen is used up after 7 hours. **Lambert and Davis** believe that the rapid CO₂ increase is due to the strongly respiring microflora.

In order to avoid the development of these "zones" detected by **Lambert and Davis**, and the reduction in yield resulting from this, **Stoller, Smith and Brown (1937)** composted horse manure and synthetic material in a revolving drum and showed in this way that with an improved aeration of the compost the composting time can be reduced. According to **Stoller (1954)** however, such an apparatus is not suited for composting under commercial conditions.

Lambert (1941) pointed out that the physical conditions (temperature, humidity, and aeration) under commercial conditions depend to a great extent on the size and density of the compost heap. One must try to avoid the development of anaerobic zones by reducing the height and width of the heap. During winter time, when there are big temperature differences between the air in the compost and the free air,

the heaps may be stacked wider than during the summer. Heavy and tightly packed material must be composted in smaller heaps than very strawy compost with greater permeability for air.

During the pasteurization—which is a microbiological phase of composting—the compost must be a medium “for the optimum development of aerobic, thermophilic microorganisms” (**Sinden and Hauser**, 1953). The ammonia present in the compost is converted during the pasteurization into microbiological protein, which—after the death of the microorganisms—serves as an organic nitrogen source for the mushroom mycelium. The microbiological conversion is not only desired, but the removal of ammonia is important, as ammonia is toxic to mushroom mycelium (**Stoller**, 1945).

During the microbiological and chemical-oxidative reactions considerable amounts of oxygen are consumed and equivalent amounts of carbon dioxide develop. If the CO₂ enriched air is not carried away and replaced by fresh air, composting and pasteurization are inhibited. The inhibition of the microbial activity is probably due to high CO₂-concentrations and not to low oxygen levels (**Klebs**, 1896; **Porodko**, 1904; **Brown**, 1922; **Zycha**, 1937; **Burges and Fenton**, 1953). The chemical-oxidative reactions occur also in the presence of high CO₂-concentrations, as long as oxygen is available.

Only one remark (**Lambert**, 1933) could be found by the author about the CO₂-concentration in beds impregnated with mycelium. According to this the CO₂-content in the compost beneath fast growing sporophores lies between 0.3 and 0.4 volume per cent. **Stoller** (1936) grew mushrooms on horse manure compost in 3.5 litre glazed pots. Among other factors he determined the CO₂-content of the air in the compost. Before watering he observed 0.2 to 0.4 volume per cent. CO₂. After heavy watering there was an increase up to 5.0 per cent. In practice, however, very heavy watering of the beds should be avoided; therefore it is not very probable that such high concentrations due to watering do occur. **Stoller** also pointed out that “upon light watering so that only the top soil is saturated with water, the carbon dioxide concentration does not change significantly” (**Stoller**, 1936, p. 88). **Stoller** is of the opinion that the increase after heavy watering is due to an increased microbial activity in the compost. Furthermore **Stoller** mentioned a direct dependence between CO₂-concentration and temperature. The author could not find any publication about the CO₂-concentrations in the air of the compost under normal growing conditions during the whole cultivation period.

In order to determine the CO₂-content under commercial conditions, CO₂-measurements of the room and compost-air were made on the farm of Mr. Mende, a mushroom grower in West Berlin. On the average during the last two years the yield was 10 — 11 kg./m² per crop (three crops per year) on this farm. Though these yields are not the maximum, it can be said that the conditions on this farm are typical for modern shelf growing and that—with certain limitations—general valid conclusions could be drawn.

2. Method:

A special method is necessary in order to take an air sample from a bed, 15 to 20 cm. high with a low air space. Continuous suction is not possible, because in this case room air would also be sucked in. The same difficulty occurs if a tube is pushed into the compost: With a tube pushed into the compost there would be formed an intermediate space between the outer wall of the tube and the compost; through this a part of the room air would be sucked in. Further, more mycelium would be destroyed by pushing the tube into the compost and the structure of the compost would also be influenced. All these factors could obliterate the real data. In order to avoid such errors, specially constructed glass apparatus for air sampling was installed in the compost before peakheating; they remained on the same spot during the whole culture period. Three sets of the apparatus were placed at different places in each room. Beside each apparatus two thermometers were installed for temperature control.

The CO₂-determinations were carried out in seven different cropping rooms during all seasons. The houses are 21 m (70 ft.) long, 3 m (10 ft.) high, and 5 m (16 ft. 8 in.) wide. At both sides of a central path are four shelves with a total bed area of 230 m² (2,500 sq. ft.). The houses are heated with a warm water heating system. Ventilation openings and fans allow four air changes per hour. Short composted horse manure is used as compost. For casing a loamy sand is used. The cultivated mushroom is a white variety, the grain spawn is produced by well-known processes (Sinden, 1932, 1935; Lambert, 1933; Lescarbourea, 1940).

In order to reach peak-heating temperature, the cropping room is heated up with the warm water pipes to 40 to 45° C. The further heating to peak-heating temperatures is done by the thermophilic microflora of the compost. For oxygen supply a fan, installed at the bottom of one gable, blows electrically heated air into the house (fan capacity: 600 m³/h). Another fan of the same capacity for air movement is installed in the middle of the house and blows the air down. The first CO₂-measurement was carried out 12 to 24 hours after peak-heating started; further samples were taken at intervals of 48 to 72 hours.

3. Results

CO₂-concentrations between 5 and 16 volume per cent. were measured during peak-heating in the beds. The CO₂-content of the room air was between 0.5 and 2.5 volume per cent. CO₂, depending on the place of sampling.

Considerable differences of temperatures and CO₂-concentrations occurred under the conditions described. With the heating up of the room the warm air rose to the top and heated up the compost on the upper shelves. Owing to the high temperatures, these produced more CO₂ than the lower, cooler beds (Table 1).

TABLE 1

CO₂-content of compost air 12 hours
after beginning of pasteurisation

Place of air sampling	temperature in °F.	CO ₂ -content in volume per cent
Shelf 1, height 40 cm. (1 ft. 8 in.)	82	2.50
Shelf 2, height 105 cm. (3 ft. 6 in.)	100	7.25
Shelf 3, height 170 cm. (5 ft. 8 in.)	102	7.55
Shelf 4, height 235 cm. (7 ft. 6 in.)	111	7.60

Due to the low density at high temperatures the carbon dioxide does not fall down to the floor, but mixes with the warm air in the upper part of the room (see Table 2). On the farm mentioned the pasteurisation is considered to be finished, when the temperatures fall, though fresh air is continuously blown in. The rooms are then quickly cooled down. With the cooling the CO₂-content in the compost fell to a concentration of about 1 per cent and from spawning to casing in some cases down to 0.25 per cent.

TABLE 2

CO₂-concentrations of room air at different heights in cropping rooms at the beginning and at the end of peak-heating

Height of air sampled	1st day of Pasteurisation (house No. 14)		End of Pasteurisation (house No. 3)	
	temp. °F.	CO ₂ in volume per cent	temp. °C.	CO ₂ in volume per cent.
7 ft. 4 in.	113	1.23	118	1.43
2 ft.	93	0.77	100	0.62
7 ft. 4 in.	113	1.15	117	1.30
2 ft.	95	0.59	95	0.63
7 ft. 4 in.	113	1.08	115	1.18
2 ft.	99	0.70	100	0.27
7 ft. 4 in.	—	—	118	1.71
2 ft.	—	—	100	0.78

It has to be mentioned that the plots, which during pasteurisation gave high CO₂-concentrations, subsequently gave the lowest CO₂-values. The continual decrease remained so long as there was no temperature increase. Because of the arrangement of the cropping rooms and because of the "time table" on the farm, it happens that a spawned house is next to one being peak-heated. The peak-heating temperatures led to an undesirable increase of temperatures in the spawned house. Table 3 shows such conditions. The beds were spawned on 6. 5. 57 and had not been cased. The equilibrium between CO₂ in room—and compost—air by diffusion was not disturbed by the casing soil.

TABLE 3

Dependence of the CO₂-content of
compost air from bed temperature

Glass flask	CO ₂ -content in volume per cent on the 15.V.57: t=24° C. 17.V.57 : t=30·2° C. 21.V.57: t=26·5°C.		
A	1·09	2·33	1·16
B	0·95	1·94	0·78
C	0·62	1·23	0·54
Room air t in °C. 25 volume per cent 0·273 CO ₂		29·5 0·570	24·5 0·168

[to be contd.]



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What is believed to be one of the first houses to be heated in this way has just been erected on Mr. B. A. Steward's mushroom farm at Thorpe Grange, Trimley, Suffolk. It has two 3.9 kilowatt cables set 3" deep in the 40' × 12' concrete floor; and the walls and roof of the house are lined with 1" of heat-retaining fibre-glass.

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ABANDON ALL PUBLICITY PLANS

I was delighted to see that Mr. Middlebrook was once again contributing to the Bulletin, he has been absent far too long, and I would wholeheartedly like to support the sound sense contained in his last paragraph. "Something drastic has to be said and done about this over-production menace". The question is what?

At the risk of sticking my neck out (not for the first time), I would like to make some suggestions.

First : Abandon all Publicity plans. It is my belief that a lot of the present difficulties of the Industry are due to too much publicity which is now boomeranging on us. It is always interesting to note that in spite of publicity the controlling factor for the price of mushrooms is still the quantity on the market. It is probably only due to the fact that many of us have been suffering from depressed yields that the price has remained where it is—and that is nothing wonderful.

I have yet to be convinced that publicity in this field bears one jot or tittle on the quantity of mushrooms sold. More mushrooms are sold now, it is true, but that could easily be because more are in the shops, and in shops where they never were before. The argument that without publicity the price *might* have been even worse can only be proved by suspending all publicity activities for a year and seeing what happens. Why not try?

Apparently we spent £4,000 last Summer without any marked increase in sales. Surely this is an indication that our publicity efforts are having little if any impact on the general public and that either we should stop them or *else do ten times as much*. Some publicity experts I have spoken to are of the opinion that to spend £4,000 is just a waste of money.

Second : Assuming that we do abandon publicity what can be done about the elaborate machinery that has been set up for collecting the levy? I suggest that it is allowed to continue and the money be used for eventually setting up a Co-operative wholesale organisation or perhaps better, handed over to the Research Station. It seems that at present there is no satisfactory way of handling these thick walled straws (or rather I can not find one and like Mr. Middlebrook I have done everything I can think of including throwing it away! Here surely is a problem crying out to be solved.

Third : We would do well to investigate how the Hop Growers organise their affairs. It seems that in 1931 their industry got completely bogged down and in dire straits due entirely to extreme over-production and also the import of foreign hops. The growers asked the Government to impose restrictions on foreign hops. They replied that when the Industry could control 95% of the growers in the country as regards the quantity grown they would impose a tariff on imported hops and also make laws to tie the other 5% of growers who would not join the scheme voluntarily.

The result of this was that the Board was formed and an agreement was made with the brewers (reviewed and liable to cancellation every seven years) on the strength of which the Government imposed the duty. Since then the Board has worked very satisfactorily and has been eyed with envy by many other industries.

The differences between the two industries are obvious but where the hop growers have their convenient brewers we have the poor old spawn maker. Could this be the medium of control?

The point is, that in spite of what some people may think, we have got to realise that the demand for mushrooms is far from unlimited and that saturation is reached very quickly, very easily and quite frequently.

This letter will no doubt bring a storm of protest, abuse and scorn (I dare not hope for support) but if it serves to spark off a controversy which ultimately may lead to constructive action then trailing my coat will not have been in vain.

Over-production is the curse of an industry, the solution so simple, to put it into practice so difficult.

But to quote Mr. Middlebrook again, "something drastic has to be said and done about this over-production menace".

If it is not then we shall all fall by the wayside except those who do not have to make a living out of this game. I await Mr. Middlebrook's 14 pounder with interest.

JOHN H. SCRIMGEOUR, *Dorset.*

EDITOR'S NOTE: This letter from Mr. Scrimgeour appears to be a little ambiguous, suggesting first that there has been too much publicity and secondly, doubting if publicity "bears one jot or tittle on the quantity of mushrooms sold". It remains a solid fact that about £6,000 was spent last year on publicity and if, by so doing, the industry obtained too much publicity, then the age of miracles is by no means past, and the Publicity Committee is to be congratulated.

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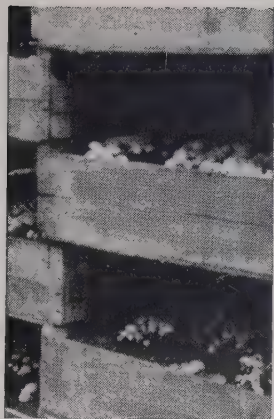
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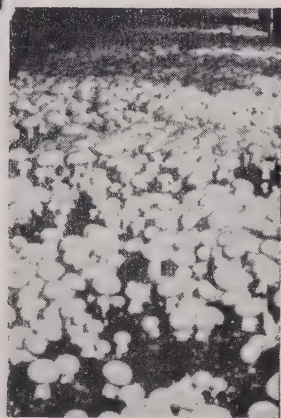
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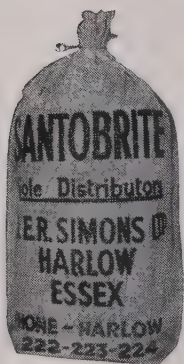
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Now used in their millions by growers throughout the British Isles. They contain 75% Viking Brand Peat: 'Best Plants have roots in Jiffy Pots.' Send for prices and descriptive leaflet.

IN-DIGEST-IBLE... By STANLEY MIDDLEBROOK

It couldn't be anybody but Atkins who once said "Middlebrook obviously lives in a sleepy village". How wrong he always was!

The Electricity Board had some line repairs to do in our village, and picked the early hours of the next Sunday morning. Softly, smoothly and with condescending courtesy they asked me which six hours would be most convenient for us to have a cut: 2 a.m. to 8 a.m., 1 a.m. to 7 a.m., or 12 midnight to 6 a.m. With frost and snow about in Mid-January and the chance of very low temperatures, this early morning cut with heat off for 6 hours, might prove disastrous so I suggested 10 p.m. to 4 a.m. No good. What about 11 to 5 then? No good. "Why not?" I asked, "Don't you care about us at all?" "It's not that exactly," they replied; "we have to consider the greatest good for the greatest number. We couldn't possibly cut before midnight". When asked why not, they said there might still be one or two people watching T.V. up to midnight!

* * * * *

An article on The Economics of a Mushroom in the Financial Times (Feb. 17.1960) is exceptionally well written. Two points appealed to me especially. Mushroom growers are described as "probably one of the most dedicated groups of horticulturists in the country." And Mushroom growing "remains a business essentially for the enthusiast—and for the experimentally minded."

* * / * * * *

From time to time I have commented on the modern pithy-centred and/or hard-walled straws, and the difficulties they present in composting. There are some people who say the nature of the straw walls hasn't changed and anyway doesn't matter. They talk nonsense.

To get some sort of clarity on the subject I recently wrote to the National Institute of Agricultural Botany at Cambridge, and in reply they supported my suspicions.

"... It is true the character of the straw of the varieties of wheat commonly grown in this country has changed in recent years. The old varieties commonly grown before the war usually had straw with a relatively thin wall surrounding a wide empty cavity. More recently varieties have become widely grown in which the straw usually has a thicker wall and the pith cavity is reduced in diameter or may even be completely filled with pith. As far as we know the chemical composition of the straw is the same whether the walls are thick or thin—however it is possible that the physical difference in the straw would affect its suitability for compost making."

It is our opinion at Brayton that the relatively thicker walls of modern straws (even those with an open cavity and no pith) consist of several layers of hard-to-compost material—more layers and much

harder than pre-war straw. It is often possible to examine a peak-heated straw and find the outer skin normally composted while the inner one (seen when the outer ones are peeled off) is practically untouched by the composting process. Ideally, I think, we should separate these layers before composting. But how? Perhaps the ultra-modern, ultra-successful growers are secretly doing just this.

* * * * *

See Bulletin 122, p. 40. What right has the author of the 4th Report of the Agricultural Improvement Council to classify several obviously different diseases or conditions under the common title "Watery Stipe"? For surely that is what is meant by the expression "symptoms of which (under different names) . . ."

It is symptomatic (under one name—Ignorance) of the one-track, personal-axe attitude of some of our scientific advisers. There is, however, one point of agreement among the wise men: "Our chief aim in life is to confuse mushroom growers, to blind them to our ignorance. I'm going to call everything Watery Stipe; my colleague will describe all unknown trouble as La France; for convenience all will shortly be changed by the office boy to Atomosis. If we don't know what we're talking about how can the grower hope to know, and what more could we want!"

* * * * *

"Keep out damp with STROMA (new non-silicone damp repellent treatment)" runs an advert. I feel there's something wrong about it. "Keep out stroma with damp" is better advice.

* * * * *

It would have been better if Alderton had thought of writing his February leader in the July issue. We might then have had it inflicted upon us when we were in a more receptive mood.

By what edict do we assume prices should automatically fall from year to year? What is terribly clever about 1958 prices being held in 1959? It doesn't mean a thing, especially if profits weren't held. What is meant by a substantial increase in production in 1959? Higher yields per sq. ft. or greater area? I doubt very much if yields were on average higher than in 1958 and area increase is relative in importance to the size of the people increasing. If one 100,000 sq. ft. grower doubles up we sleep happily at nights, but if ten 10,000 sq. ft. men double up we panic, and talk of wholesale expansion ruining the industry. We forget that it's far easier for a large grower to expand than a small man. What in fact was the increase in area in 1959 compared with '58 or '57? And how did costs go up in those years?

But as I said, there will be more cause for panic in July. Wait for it!

* * * * *

Many must have thought of it, but few can have tried it: the idea of sowing some grass seed in the peat at time of casing. On those occasions when pinheads seem very shy perhaps they would be less reluctant to appear if they knew they could hide themselves in a natural fashion in a moist grassy blanket.

* * * * *

If you have an oil fired boiler that has been giving untold trouble for two years and if your heating engineer and your burner supplier have been using you as a shuttlecock in an interminable game of avoiding their separate responsibilities, call in N.I.F.E.S. You'll be astonished at the result. The opposing parties leap into concerted action and shoulder their responsibilities like men. It's good advice I give—but don't wait two years.

* * * * *

As everyone in this country must know, a very gifted writer is circulating fortnightly a subscription Newsletter. All power to him. To supplement this and to enable every mushroom grower to be ahead of every other mushroom grower (ad absurdum), we're thinking of publishing a Brayton Brains Bulletin, in which we'll flog you 5 new production ideas per week at £5 each. £25 per week – worth every penny.

The suggestion is based on the following piece of wisdom:

The successful man is one who listens to other people's ideas and uses them himself.

Calypto . . .

MR. MIDDLEBROOK or ("This is Your Life S.M.")

The Bulletin's now worth an extra donation
With Middlebrook back in full circulation:
(Our first Editorial Stenographer!
What an honour to be your biographer!)
As founder-member of the MGA,
He sowed the seeds and led the way:
As founder-editor advised grower-brothers
To help themselves while helping others:
As first vice-chairman he 'cut a dash',
With glasses, pipe and neat moustache:
And two years later the chair did grace;
——The right man in the right place.
His profile study through and through,
In Bulletin Fourteen and Twenty-two,
To meet the man and study the face
And soon decide he's of higher race;
Other Bulletins conceal his nose,
Nevertheless—"characteristic pose".
One capiton reads "Middlebrook is hurt",
(So one must be quite careful and curt).
Yet, it's he, himself, who once relates
A personal crack on balding pates.
For years he queried the folly or wisdom
Of letting trays get into his system:
This topic, through his diary he drags it
Till four years ago he announces their exit.
He had thrown them out—the blasted lot—
Ere "bottom-tray lumbago" her victim got.
(Perhaps he'll gladly recall those days,
Now reading of post-Copenhagen trays).
Reviewing his writings, one never lacks
Many a laugh at his 'wise-cracks':

Was his biggest one ever, you well may ask,
When one grower (taken by another to task
Maintaining he'd grown a Discovery Dome)
Had a cross-cut stuck in his one at home?
Or, when inside-out-ones grew in a house
A reversing machine was put into use?
Or the one he spun regarding Aer Lingus,
Being more appropriately named Aer Fungus?
To find Mr. Middlebrook, here is the key,
Bulletins—thirty-seven and Seventy-three;
Perusing the former, just read its Editorial
And you'll exclaim "What a memorial!"
While, in the latter, he squats on the hand
Of one well known throughout the land,
Who there and then, on the very next page,
Describes Middlebrook but excludes his age.
These Heavenly twins S.M. and F.C.A.
Are like "Heavenly Mushrooms" in in U.S.A.,
Though many a time to read what they wrote,
(Ignoring the plank while exposing the mote),
The casual reader would readily think
That war between them was on the brink;
Yet, eighteen years ago, by Christmas Day,
These two unknowns had fused in harmony;
And every grower is Middlebrook's debtor,
Indebted for such an "historic letter".
Now! Car-racer, Argumentator, Writer,
Mushroomer, Musician and Painter,
Stanley Middlebrook, Esquire,
Brayton, Salsby, Yorkshire,
Will you, Sir, please accept this hand?
——MGA's First Gentleman of The Land.

F.P.

T/V CAMPAIGN INCONCLUSIVE

The results of the Television campaign to publicise mushrooms in the Midlands, which involved the expenditure of about £3,750, are regarded by both the MGA Executive Committee and the Publicity Committee as inconclusive.

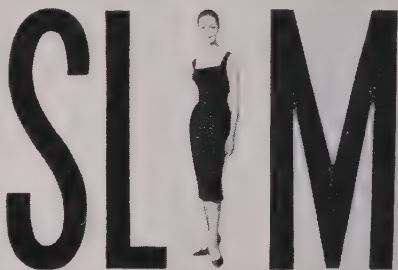
Whilst the major aim of this campaign was to increase the sale of mushrooms it was also deliberately timed to run during the summer period when mushrooms sales always flag and prices are at their lowest.

Before recommending the expenditure of what, to the MGA Publicity finances, is a large sum, the Publicity Committee took expert advice from the Association's advertising agents, Messrs. G. Street & Co. Ltd., and Mr. Morley of Street's twice attended meetings of the committee. He warned the committee that, because of the small amount being spent, the programme could not be regarded as a sales promotion campaign but purely as an aid to existing sales. It would be difficult, he said, to trace direct results because branded goods, emanating from one source, were not being used, but he was quite confident that increased sales would result.

It will be recalled that the campaign began from Birmingham in May, and, almost immediately, the hot weather set in, weather which was to persist throughout the period covered by the entire programme. It was because of the weather that the programme was halted for a short time, and was recommenced so that, instead of finishing in early August, it ran on until the first week in September.

In all four films, each of seven seconds duration (seven visual and five seconds speaking) were used, one dealing with mushrooms and slimming being added late in the programme because of the warm weather. The other three films featured mushrooms on toast, mushrooms with bacon and eggs and mushrooms with steak. The four films were produced by experts and the results were considered to be highly satisfactory.

In an effort to assess the campaign results the Publicity Committee ordered that four separate surveys should be taken in the area covered by the programme, surveys which included salesmen in Birmingham market and retailers throughout the area. About twenty of the latter were visited on three of the four occasions and their opinions varied considerably. For instance, in the final survey report, carried out like the earlier ones by Mr. T. J. Rudkin, Mr. G. Breedon of Coleshill said "I think the campaign has helped a lot. I reckon our sales are up by 50%



This is the picture viewers saw, accompanied by the spoken word extolling the virtues of mushrooms as a slimming aid.

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over last year ". An even better story came from a Mr. Smith of Omerley Road, Worcester, who said " I'm now selling four to five times as many mushrooms as I did a year ago. It must be due to the campaign although, of course, I now put mushrooms on display every day—before I didn't ". On the other side of the picture were those retailers who said that the campaign had had no effect at all, with many making the obvious point that when prices were low sales were high. This final survey was made early in October, just about six weeks after the programme had been completed. It showed that Lewis's Stores for instance, had considerably increased sales and it showed too that consignments of mushrooms to Birmingham Market had been greatly increased during the period under review—as much as by 15% in the case of one Salesman. In all, about 40% of the retailers were of the opinion that the campaign had assisted sales in varying degrees whilst 60% said that it had no effect at all. Only the two retailers mentioned claimed a spectacular increase in sales.

The issue was complicated by three main things—hot weather, low prices and increased consignments.

Mr. Rudkin came to the conclusion that the campaign had not been a success but this opinion was not shared unanimously by the remainder of the Publicity Committee, neither was this conclusion agreed by the Executive Committee who felt that, because of the intervening factors, it was not possible to reach any sound conclusion.

For the record, the surveys took place on 8th, 9th and 10th April (when 41 people were interviewed), 17th, 18th and 19th June; 10th, 11th and 12th August, and 12th, 13th and 14th October. The mushroom films appeared on 55 occasions.

TRIP TO FRANCE

As a number of MGA members wishing to take part in the trip to France in May have intimated that they prefer to take their own cars, it has been decided to make arrangements on these lines for the whole party, thus dispensing with the need for coaches, either on this side or in France.

As present arrangements stand, the party will leave England on Saturday, 21st May, and will make the journey to Rotterdam by transport plane or planes. It is proposed to visit the Floriade in Rotterdam and the Dutch Mushroom Research Station before journeying into Belgium (M. Guy de Man) to visit one or more farms. After that it is planned to visit some farms in France, including that of M. André Sarazin. In all, the party will be away from England for probably four nights, returning on Wednesday, 25th May, at the earliest. Car freight charges vary with the size of the car but assuming that the car is 13' in length and it carries four passengers, the cost per head including car ferrying and passenger fares will not exceed £10 per head, to which would have to be added hotel and petrol charges abroad. If you are interested in making the trip please communicate without delay to the MGA Secretary, intimating the size of your car and how many passengers you would be willing to take or, on the other hand, if you wish to travel as a car passenger.

THE LATE DR. BARNES

The death has occurred of Dr. H. F. Barnes, of Rothamsted, one of the world's authorities on gall midges. The gall midges which worry mushroom growers so frequently are the Cecids, and when I was attempting to assess the extent of the serious infestations in 1956 it was on Dr. Barnes that I first called. He had for many years been interested in this problem and he warned me that, as there were over 600 species in the immense Cecidomyidae family, a necessary preliminary to the investigation we proposed to ask Littlehampton to undertake was work to identify the various kinds which were causing us anxiety. From then on I spent a lot of time catching Cecid flies and sending them to him preserved in phials of alcohol. To my relief, and probably to the relief of Dr. Barnes in this context, Dr. N. W. Hussey joined Littlehampton on 1st May that year, and very soon took over the Cecid investigation. The name of Dr. Barnes is perpetuated in the mushroom literature in *Mycophila speyeri* Barnes and *Mycophila barnesi* Edwards.

FCA

AUTHOR AND RESEARCH WORKER

News has reached the MGA of the death, in Moscow, of Mr. N. G. Gromov, one of the leading mushroom growers and mushroom research workers in Russia.

Mr. Gromov, who conducted research work on the state farm of "Teplitshni", near Moscow, started work with mushrooms as far back as 1934 and in 1937 he was producing spawn on the Smitshka state farm, his method being that introduced to Russia in 1932 by Dr. E. C. Kliushnikova.

Among the late Mr. Gromov's published works was "Champignon", which appeared in 1957.



DID YOU KNOW?

Public Relations consultants have no fixed scale of fees. Each firm adheres to its own standard rates, but as a guide, the cost of a comprehensive campaign might average from £3,000 - £15,000 per annum, dependent on circumstances.

PR Directory First Edition 1960.



FANCY THAT...!

A comment on the MGA's television publicity campaign from Birmingham by a Castle Bromwich greengrocer:

"I think the television advertising was too quick - if you were not in the room when it was on, you missed it."



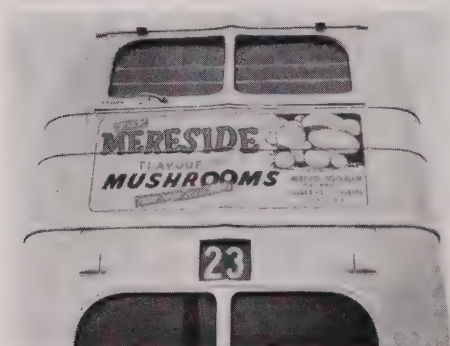
On the left of the picture is WENDY GARRETT, Asst. MGA Secretary with VALERIE BAKER, the MGA Public Relations Officer.

VALERIE BAKER with the MGA Stand at the Southend Food Fair

(see next page)



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T. J. Poupart Ltd., Covent Garden, London, W.C.2		115	10	0
R. E. Jenkinson Ltd., Covent Garden, London, W.C.		105	0	0
Dan Wuille & Co. Ltd., Covent Garden, London, W.C.		100	0	0
Geo. Jackson & Co. Ltd., Smithfield Market, Birmingham		50	0	0
Wm. Morgan & Co. Ltd., Custom House Street, Cardiff		5	5	0
Ernest White Ltd., Kirkgate Market, Leeds		5	0	0

***Spawn Merchants :**

H. Mount & Sons, Ltd., Littlebourne, Canterbury, Kent
 Monlough Food Production Co. Ltd., Ballygowan, Belfast
 W. Darlington & Sons, Ltd., Southcourt Road, Worthing, Sussex

Sundriesmen :

Bradford Fertilizer Co. Ltd., Whitefield Place, Gillington, Bradford	10	10	0
Arthur Coomer Ltd., Farlington, Portsmouth, Hants.	10	10	0

*Amounts collected by spawn merchants are not for publication.

LAST MONTH'S CONTRIBUTORS

Spawn Merchants:

S. A. F. Sampson Ltd., Oving, Chichester.
 White Queen Ltd., Yaxley, Peterborough.
 Monlough Food Production Co. Ltd., Ballygowan, Belfast.

Salesmen:

	£	s.	d.
Reuben Levy Ltd., 88 Spitalfields Market, London, S.E.1		3	15 3
Ed. H. Lewis & Son Ltd., Covent Garden, London, W.C.2		5	5 0
Ernest Broadbelt Ltd., Smithfield Market, Manchester 4		5	5 0

MUSHROOM PUBLICITY IN ESSEX

The National Farmers' Union Home Grown Food Fair which opened at the Palace in Southend, Essex, on 16th February, for 3 days, drew over 2,000 housewives from the locality. The theme of the Fair was "British is Best" and a variety of products, including mushrooms, were displayed on the eight stands in the Winter Gardens in the Palace. Cookery Demonstrations were given twice each day by Doreen Davies.

The Food Fair was officially opened by Mrs. R. A. Butler, wife of the Home Secretary. At the MGA stand, Mrs. Butler was fascinated by a tray of growing mushrooms and asked several questions about production. I presented her with a pack of mushrooms.

Fresh mushrooms for the stand had been provided by Mr. R. H. Pinkerton from Hockley. These were used for a competition—"Guess the Number of Mushrooms". 750 entries were received during the three days and a mushroom apron and recipe book were given as a prize at the end of each cookery demonstration. Recipe leaflets are always popular and a thousand 'Month by Month' leaflets were given away.

I would like to add that the success of exhibitions of this sort are dependent on the co-operation of local growers, who provide fresh white mushrooms, so seldom seen in the shops, for us to exhibit and the audiences to admire.

VALERIE BAKER.

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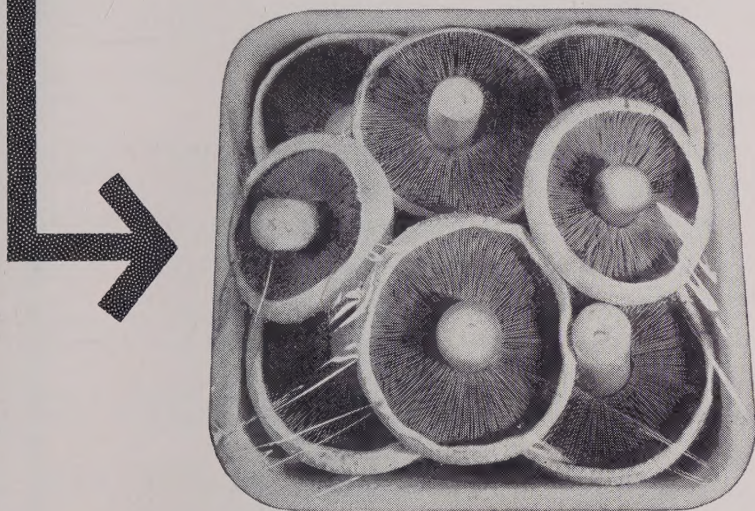
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PORTABLE BOILERS for Peak Heating and/or Soil Sterilizing, with equipment to suit users. **REED BROS.** (Engineering) LTD., Replant Works, Woolwich Industrial Estate, London, S.E.18.

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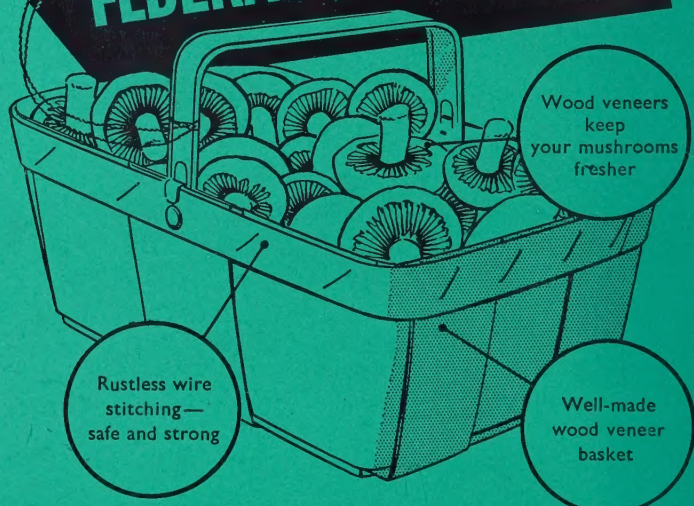
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